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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of Bradford H. Needham

Atty. Docket No: 42390.P11167

App. Serial. No.: 09/912,427

Group Art Unit: 2143

Filed: 07/26/2001

Examiner: Lezak, Arienne M.

Title: METHOD AND APPARATUS FOR IMAGE SHARING BASED ON FACES IN AN IMAGE

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Alexandria, VA 22313-1450

**BRIEF ON APPEAL**

Pursuant to Appellant's Notice of Appeal filed on March 15, 2006, Appellant presents this Brief and fee under 37 C.F.R. § 1.17(c) in appeal of the Final Rejection dated December 15, 2005.

**I. REAL PARTY IN INTEREST.**

Intel Corporation is the real party in interest.

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## **II. RELATED APPEALS AND INTERFERENCES.**

There are no related appeals or interferences before the Board of Patent Appeals and Interferences known to Appellant, the Appellant's legal representatives, or assignee that will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

## **III. STATUS OF CLAIMS**

Claims 1-32 are pending in the application. Claims 1-32 stand finally rejected and are the claims subject to this appeal as are reproduced in Appendix A.

## **IV. STATUS OF AMENDMENTS**

No amendments were filed after the Office Action dated December 15, 2005 (hereafter "Office Action").

## **V. SUMMARY OF CLAIMED SUBJECT MATTER**

Simply stated and generally speaking, one embodiment of Appellant's invention (as captured in independent Claims 1, 8, 12 and 18) is directed to a method, system and article for image sharing based upon faces in an image. A sharing rule defines which one or more recipients images are to be shared with based on face identifying information. More specifically, face identifying information associated with an image is identified, and the face identifying information is applied to the sharing rule to determine which one or more recipients the image should be shared with. (Specification, Paragraph 14).

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Face identifying information may be associated with an image manually or automatically. (Specification, Paragraph 16). Face identifying information can be of various types such as personal names, identification numbers, or any other face identifying information associated with an image. The face identifying information may also be associated with the image before, contemporaneously with, or after the image is taken and may be associated with the image in the camera or elsewhere such as on a computer system. Indeed, the image may be further processed by, for example, changing format, before or after the face identifying information is associated with the image. (Specification, Paragraph 18). Face identifying information may be applied to one or more sharing rules to determine which one or more recipients an image should be made available. A sharing rule may define that all images of a particular person should be shared with a particular recipient or a group(s) of recipients (Specification, Paragraph 20), specify a set of face identifying information (e.g. images taken of specific people), specify a range of face identifying information (e.g. images taken of all members of a family), or specify one or more characteristics of a particular item or set of face identifying information (e.g. images taken of all males in a family), whether in place of or in combination with specifying particular face identifying information such as a personal name. (Specification, Paragraphs 21)

**VI. GROUND OF REJECTION TO BE REVIEWED ON APPEAL**

The sole issue for consideration in this appeal is whether Claims 1-32 are properly rejected under 35 U.S.C. § 103 as being unpatentable over U.S. Patent No. 5,760,917 ("Sheridan") in view of U.S. Patent No. 6,611,613 ("Kang").

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## VII. ARGUMENTS

### A. THE COMBINATION OF SHERIDAN AND KANG IS IMPROPER.

First and foremost, Appellant respectfully submits that the Examiner inappropriately combined Sheridan and Kang. Specifically, Sheridan discusses an image distribution method and system, with no mention of any type of facial recognition technology. Kang, on the other hand, describes an apparatus and method for detecting speaking person's eyes and face, without any suggestion that the system may be used in an image distribution method and system of Sheridan. Appellant respectfully submits that the references cannot be combined in the manner suggested by the Examiner.

Nothing in either reference suggests that one of ordinary skill in the art would have thought to combine the two baring hindsight. The mere fact that a combination of the two may have produced beneficial results does not *prima facie* motivate a combination of the two. In other words, the fact that the combined references may provide a benefit does not render the combination of the references obvious or proper. As set out in M.P.E.P. § 706.02(j), "(t)here must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings." Appellant respectfully submits that there is no such motivation.

The Examiner's alleged motivation is that it would have been obvious to one of ordinary skill in the art at the time of the invention by Appellants to incorporate the use of face recognition technology into the Sheridan "image distribution/indexing" method and

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system because Kang “enumerates the fact that image indexing is one field, which highly regards face recognition technology (Kang, Col. 1, lines 26-30)”. Appellant respectfully disagrees and suggests that the Examiner’s use of the phrase “image distribution/indexing” to describe Sheridan is improper and inaccurate. Sheridan is an image distribution system and nothing in the reference discusses image indexing – a search for the word “index”, for example, fails to retrieve any such words. Thus the fact that Kang discusses “image indexing” is irrelevant to the present invention. Appellant respectfully submits that the Examiner’s alleged motivation is in fact based solely on hindsight. More specifically, since Sheridan and Kang are directed at different technology areas (image distribution and facial recognition technology), Appellant submits that the combination of these references appears to be based on hindsight and is a mere articulation of a desirable result without any showing whatsoever that the combination of the references is enabled and/or may properly be combined. Appellant thus once again emphasizes that a desirable result *cannot* in and of itself be deemed to be a motivation and respectfully requests the rejections based on this combination of references to be overturned.

**B. THE CLAIMS ARE NOT OBVIOUS OVER THE CITED  
REFERENCES AND THE CLAIM REJECTIONS SHOULD BE  
REVERSED.**

i) The Examiner failed to meet the burden of establishing a *prima facie* case of unpatentability

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As a preliminary matter, Appellant respectfully submits that the rejection of Claims 1-32 is facially deficient because the Examiner has not established a *prima facie* case of unpatentability. As is well-established, in order to establish a *prima facie* case of unpatentability under 35 U.S.C. § 103, the combination of the cited prior art must teach or suggest every limitation of the claims being rejected. Therefore, if even one claim element or limitation is not taught or suggested by the combination of references, a *prima facie* case is not established. Additionally, as the Federal Circuit has noted,

“As adapted to ex parte procedure, *Graham* [v. John Deere Co.] is interpreted as continuing to place the burden of proof on the Patent Office which requires it to produce the factual basis for its rejection of an application under sections 102 and 103.”

*In re Piasecki*, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984) (citing *In re Warner*, 379 F.2d 1011, 1016, 154 USPQ 173, 177 (CCPA 1967)). The Examiner thus has the burden of producing a factual basis for his rejection and for establishing unpatentability by identifying how each recited claim element is allegedly disclosed by the cited reference(s) or combination of references. The Examiner has failed to establish such a *prima facie* case (i.e., one based on factual basis) and has merely provided bare allegations that the combination of references render the claims unpatentable. As previously discussed, Appellant submits that the Examiner's alleged motivation for the combination is purely speculative and based on hindsight, i.e., the Examiner has failed to meet the requisite burden of proof. The rejection of Claims 1-32 should thus be reversed for at least this reason.

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ii) The combination of references cited by the Examiner do not render Claims 1-32 unpatentable

The lack of a *prima facie* case notwithstanding, Appellant hereby presents detailed arguments for why Claims 1-32 are patentable over the cited references.

Claims 1, 11, 19, 29 and 31

Independent Claims 1, 11, 19, 29 and 31 stand rejected under 35 U.S.C. § 103 as being unpatentable over Sheridan in view of Kang. Independent Claims 1, 11, 19, 29 and 31 are method, system and computer program product claims directed to embodiments of the invention. As such, these claims all include similar elements, namely the elements of determining face identifying information for at least one face in an image, defining a sharing rule that specifies with which one or more recipients the images are to be shared with, the sharing rule based on the face identifying information, and applying the face identifying information associated with the image to the sharing rule to determine the one or more recipients with which the image should be shared. (or corresponding elements for each claim type). The Examiner collectively rejected the independent claims based on the same rationale in the Office Action and Appellant shall therefore address the rejections to these claims collectively. Any reference hereafter to "the independent claims" shall encompass all the independent claims (Claims 1, 11, 19, 29 and 31).

The Examiner implies that Sheridan teaches all elements of the claimed invention, it merely does not specifically enumerate the use of face recognition technology.

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Appellants strongly disagree. First and foremost, Appellant submits that Sheridan does NOT teach each element of the claimed invention. Specifically with respect to independent Claims 1, 11, 19, 29 and 31, each claim includes the feature of *face identifying information* for at least one face in an image and utilizing this information in a sharing rule to determine who receives an image. Appellants respectfully submit that Sheridan does not teach these elements.

The Examiner highlighted various sections of Sheridan (Sheridan, Col. 5, lines 19-42, Col. 10, lines 61-67 and Col. 11, lines 1-59) as teaching the element of "applying face identifying information associated with the image to the sharing rule to determine the one or more recipients with which the image should be shared". Appellants respectfully reiterate that nothing whatsoever in these sections teaches or suggests "face identifying information associated with an image. For example, Col. 5, lines 19-42 of Sheridan read as follows:

"At this point there is nothing further that the user at first terminal 202 need do. Hub station 201 is programmed so as to automatically transmit a message to each third party's electronic address (in this example, the electronic addresses for second and third remote terminals 203 and 204). This message will include an electronic address for the hub station (such as a URL designation for a World Wide Web site on the Internet for hub station 201) by which each third party can connect to hub station 201, a listing of the access rights of the granted access right set which the user has granted to that third party, and the access identification (which again may simply be that third party's e-mail address). Optionally, hub station 201 could include in the message an identification of the user, and/or an identification of the digital image set to which the third party has been granted access. This latter identification could be in the form of a description which the user provided, or could include a low-resolution version (such as one or more thumbnail images) of all or some of the images from the actual digital image set to which the third party has been granted access (although the actual digital image set would not be included, since it would typically be of a higher resolution which would require more time for transmission)."



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This section of Sheridan merely discusses the ability for the user to include "an identification of the user and/or an identification of the digital image set..." Appellant respectfully submits that nothing in the section above teaches or suggests the claimed feature of having face identifying information for at least one face in an image. There is no discussion of identifying a face (or anything else) in the images, let alone determining face identifying information for the face. Similarly, the other sections of Sheridan highlighted by the Examiner make no mention of "face identifying information associated with an image". See e.g., Sheridan, Col. 10, lines 61-67 and Col. 11, lines 1-59:

"The user will be able to attempt to access the digital image set corresponding to film roll 48 as soon as they receive the identification, by using any remote terminal, such as remote terminal 40A to connect to and communicate with hub station 20 by a connection 30. At that time, the user simply enters the identification and over the connection successfully completes a user registration process at hub station 20. The identification will allow the user to inquire of hub system 20 as to the location and status of the digital image set signal corresponding to the identification (and film roll 48). Hub station 20 decrypts the identification entered by the user, and can search its index for a saved digital image of predetermined characteristics associated with the decrypted identification entered by the user. By "predetermined characteristics" in this case, is referenced any suitable predetermined characteristics determined by the operator of the system. For example, hub station 20 may be set such that any image set signal received will be stored and indexed with its associated identification signal. Alternatively, the "predetermined characteristics" could be set so that only a complete image set is so stored, or incomplete image sets (such as might result from an interruption of a connection between a processor-scanner station 2A to 2N and hub station 20, or from corrupted data) or digital image sets in a format not accepted by hub 20, may be stored but are identified as not meeting the predetermined characteristics (for example, they are stored with an associated identification indicating incomplete or corrupted data, or a data format not supported by hub station 20).

If such a digital image set of predetermined characteristics exists, one or more of the images in the set may be communicated to the user at remote terminal 40A, or forwarded to another of the connected remote terminals 40B to 40N, as instructed by the user. In the latter case, this would amount to the user forwarding one or more copies of the digital image as desired. The user may then edit or print the images as desired, and may further communicate the edited image back to hub station 20 for storage in addition to or instead of, the original unaltered digital image. Furthermore, hub station 20 could be programmed to transmit to the user at a remote terminal, either upon request or automatically (in the form of advertising), details of services that can be requested from hub

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station 20. Such services may include various sized prints of an original or edited image stored at hub station 20 (either as prints by themselves, or with accompanying text or graphics, such as embodying the image in a greeting card), or the incorporation of one or more original or edited images onto a product, such as an article of clothing or other useful articles (for example, cups or plates). For this purpose, hub station 20 may communicate (preferably by transmission) the image signal and accompanying instructions, text, and/or graphics, to one or more printers (not shown) or other locations (not shown) at which the user's request may be fulfilled. Such printers or other locations may or may not be remote from hub station 20.

As mentioned digital image data may be lost in transit from a processor-scanner station to hub station 20, an error may occur during the loading of the digital image data to the hub station 20, the image quality may be poor, or some other problem may result in hub station 20 not storing the digital image set associated with the identification entered by the user.

If a digital image set of predetermined characteristics is not stored at hub station 20, different procedures can be used to inquire as to the whereabouts of such digital image set. For example, the date indication of the identification entered by the user can be compared with the current date." (Emphasis added)

Sheridan, Col. 10, lines 61-67 and Col. 11, lines 1-59:

Again, Appellants respectfully submit that nothing in this section teaches or suggests the feature of "face identifying information for at least one face in an image". The sentences highlighted above, for example, simply describes a user searching for "predetermined characteristics", which are described above in Sheridan as follows:

"By "predetermined characteristics" in this case, is referenced any suitable predetermined characteristics determined by the operator of the system. For example, hub station 20 may be set such that any image set signal received will be stored and indexed with its associated identification signal. Alternatively, the "predetermined characteristics" could be set so that only a complete image set is so stored, or incomplete image sets (such as might result from an interruption of a connection between a processor-scanner station 2A to 2N and hub station 20, or from corrupted data) or digital image sets in a format not accepted by hub 20, may be stored but are identified as not meeting the predetermined characteristics (for example, they are stored with an associated identification indicating incomplete or corrupted data, or a data format not supported by hub station 20)."

This section cannot be construed, however, to be the "face identifying information for the at least one face in an image", as claimed herein. The Specification states that "Face identifying information can be of various types such as personal names,

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identification numbers, or any other face identifying information associated with an image.” (Specification, Page 7, paragraph 18). Face identifying information thus refers to a broad range of information pertaining to *faces*. Nothing in Sheridan describes identifying faces or determining face identifying information for the face(s) in an image. Sheridan thus fails to disclose this feature of the claimed invention.

The Examiner suggests, however, that since Kang is directed to face recognition technology, if combined with Sheridan, Kang somehow teaches or suggests this element. Appellant strongly disagrees. Appellant does not dispute the fact that Kang teaches an apparatus for detecting the position of a human face in an input image or video image (Kang, Abstract). Appellants is not, however, claiming the general concept of identifying faces in an image, rather the combination of determining *face identifying information* for faces in an image and utilizing the face identifying information to automatically make images available. Thus, although Appellant concedes that Kang teaches an apparatus for detecting the position of a human face, Appellant strongly disagrees that Kang teaches or suggests determining face identifying information for a face in an image.

The Examiner relies on Col. 1, lines 26-30 of Kang, which states “A technique for detecting faces and facial area is highly regarded in various applied fields such as facial expression research, drivers' drowsiness detection, entrance/exit control, or image indexing.” Since this is the only section of Kang highlighted by the Examiner, it would appear that the Examiner is suggesting that Sheridan teaches all elements of the claimed invention with the exception of *identifying faces* and that this sentence in Kang provides this element, as well as the motivation for combining Kang with Sheridan. Appellant

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strongly disagrees. Appellant's own perusal of Kang indicates that nothing in Kang teaches or suggests the claimed feature of "determining *face identifying information* for at least one face in an image". The Examiner makes no showing that either Kang or Sheridan teaches this element. Instead, the Examiner simply cites the section of Kang above and extrapolates from there that the combination of Kang and Sheridan teaches this element. Appellant respectfully submits that the Examiner failed to meet the burden of establishing exactly how Kang and Sheridan teach or suggest the claimed feature of determining *face identifying information* for at least one face in an image" and how a sharing rule may be defined that utilizes the face identifying information. Barring such a showing, Appellants continue to maintain that the combination of Kang and Sheridan does not teach or suggest such a feature.

For all the foregoing reasons, Appellants respectfully submits that Sheridan and/or Kang, alone or in combination, do not render the independent claims and all claims dependent on these independent claims unpatentable under 35 U.S.C. § 103 and respectfully request the rejection thereof to be overturned.

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**VIII. CONCLUSION**

It is respectfully submitted that in view of the foregoing, all of the pending claims are patentable over the cited prior art references, alone or in any combination, and the Board is respectfully requested to overturn the rejections of record and allow this application to issue.

Respectfully submitted,

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**APPENDIX A**

1. (Previously presented) A method for image sharing based on a face in an image, comprising:

determining face identifying information for at least one face in an image;

defining a sharing rule that specifies which one or more recipients the image is to be shared with, the sharing rule based on the face identifying information; and

applying the face identifying information associated with the image to the sharing rule to determine the one or more recipients with which the image should be shared.

2. (Previously presented) The method of claim 1 wherein:

determining the face identifying information for the at least one face in the image comprises using a face recognition technique in conjunction with a database of face information.

3. (Previously presented) The method of claim 1 wherein:

determining the face identifying information for the at least one face in the image is performed by a user identifying a face in the image.

4. (Original) The method of claim 1, further comprising:

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automatically making the image available to the determined one or more recipients.

5. (Previously Presented) The method of claim 4, wherein making the image available comprises at least one of automatically sending a copy of the image to the determined one or more recipients by e-mail and automatically sending a link to the image on a Web site to the determined one or more recipients.
6. (Original) The method of claim 1, further comprising converting the face identifying information into face data using a face information database.
7. (Previously Presented) The method of claim 1 wherein the image comprises at least one of a digital photo and a digital video.
8. (Previously Presented) The method of claim 1 wherein the sharing rule specifies at least one of a set of face identifying information, a range of face identifying information and a characteristics of an item or set of face identifying information.
9. (Original) The method of claim 1 wherein the sharing rule comprises a rule that images are only to be shared with the one or more recipients that are on a buddy list.

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10. (Original) The method of claim 1, wherein the face identifying information comprises a personal name of a person whose face is in the image.

11. (Previously presented) A system for image sharing based on a face in an image, comprising:

a sharing rule defined which one or more recipients an image is to be shared with, the sharing rule based on face identifying information for at least one face in the image; and

a sharing engine to determine the face identifying information for the image and to apply face identifying information associated with the image to the sharing rule to determine the one or more recipients with which the image should be shared.

12. (Previously presented) The system of claim 11, wherein the sharing engine is further adapted to determine the face identifying information for the at least one face in the image using a face recognition technique in conjunction with a database of face information.

13. (Previously presented) The system of claim 11, wherein the sharing engine is further adapted to determine the face identifying information for the at least one face in the image by a user identifying a face in the image.



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14. (Original) The system of claim 11, further comprising:

a sending unit to automatically make the image available to the determined one or more recipients.

15. (Previously Presented) The system of claim 14, wherein the sending unit is adapted to at least one of automatically send a copy of the image to the determined one or more recipients by e-mail and automatically send a link to the image on a Web site to the determined one or more recipients.

16. (Original) The system of claim 11, wherein the sharing engine is further adapted to convert the face identifying information into face data using a face information database.

17. (Previously Presented) The system of claim 11 wherein the image comprises at least one of a digital photo and a digital video.

18. (Previously Presented) The system of claim 11 wherein the sharing rule specifies at least one of a set of face identifying information, a range of face identifying information and a characteristic of an item or set of face identifying information.

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19. (Previously presented) A computer program product including computer program code to cause a processor to perform a method for image sharing based on a face in an image, the method comprising:

determining face identifying information for at least one face in an image;

defining a sharing rule that specifies which one or more recipients the image is to be shared with, the sharing rule based on the face identifying information; and

applying the face identifying information associated with the image to the sharing rule to determine the one or more recipients with which the image should be shared.

20. (Previously presented) The computer program product of claim 19, wherein determining the face identifying information for the at least one face in the image further comprises using a face recognition technique in conjunction with a database of face information.

21. (Previously presented) The computer program product of claim 19, wherein determining the face identifying information for the at least one face in the image is performed by a user identifying a face in the image.

22. (Original) The computer program product of claim 19, wherein the method further comprises automatically making the image available to the determined one or more recipients.

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23. (Previously Presented) The computer program product of claim 22, wherein making the image available comprises at least one of automatically sending a copy of the image to the determined one or more recipients by e-mail and automatically sending a link to the image on a Web site to the determined one or more recipients.

24. (Original) The computer program product of claim 19, wherein the method further comprises converting the face identifying information into face data using a face information database.

25. (Previously Presented) The computer program product of claim 19 wherein the image comprises at least one of a digital photo and a digital video.

26. (Previously Presented) The computer program product of claim 19 wherein the sharing rule specifies at least one of a set of face identifying information, a range of face identifying information and a characteristic of an item or set of face identifying information.

27. (Original) The computer program product of claim 19 wherein the sharing rule comprises a rule that images are only to be shared with the one or more recipients that are on a buddy list.

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28. (Original) The computer program product of claim 19, wherein the face identifying information comprises a personal name of a person whose face is in the image.

29. (Original) A computer program product including computer program code to cause a processor to perform a method of sharing an image having a face, the method comprising:

analyzing the image to determine the face;

associating face identifying information to the image corresponding to the determined face;

determining a recipient of the image based upon the face identifying information; and

making the image available to the recipient.

30. (Previously Presented) The computer program product of claim 29 wherein the image comprises at least one of a digital photo and a digital video.

31. (Previously Added) A method of sharing an image having a face, comprising:

analyzing the image to determine the face;

associating face identifying information to the image corresponding to the determined face;

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determining a recipient of the image based upon the face identifying information; and  
making the image available to the recipient.

32. (Previously Added) The method of claim 31 wherein the image comprises at least one of a digital photo and a digital video.

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**EVIDENCE APPENDIX**

None

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**RELATED PROCEEDINGS APPENDIX**

None